

NEW PTILIIDAE RELATED TO THE SMALLEST KNOWN BEETLE.

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Seventy years ago a Russian traveling in the United States collected a colony of microscopic beetles in a fungus in Georgia and no coleopterist appears to have found the species since. It was described as one-tenth line (a hundred-twentieth part of an inch) in length, and about one-fourth as wide. But although the writer has never seen a specimen of this species it can probably be found by any one who has the patience and vision to search for it in the Southern States, now that habits of certain related species described below offer the clue.

The present paper results from the receipt at the National Museum of a small vial containing fifty minute beetles and four larvae, supposed to be their young, from Dr. A. Dampf in the Federal District of Mexico, who believed them to be the smallest of all kinds of beetles. In this he is very nearly right, for although two or three slightly smaller species are below described, its length of just over a half millimeter is accompanied by the most slender and cylindrical body-form yet known in the family, measuring only about one-tenth millimeter in greatest diameter. These specimens were found in a "Polyporus" fungus (determined by Dr. J. R. Weir as *Fomes pinicola* (Swendener) Ckl.) growing on *Abies religiosa* in the Desierto de los Leones, Distrito Federal, Mex., at an altitude of nearly eleven thousand feet, and although no information was sent describing how it lived in the fungus, its extreme form strongly suggests specialization for life in the vertical spore tubes, and its coloration (clear yellow with the head black), suggests that it sits in the tubes, head downward, and nearly flush with the under surface of the fungus. The larvae, on the contrary have the tail-end infusate and strongly armed, suggesting that it assumes the reverse position in the spore tube. Among the beetles in the vial was a unique example of a distinct but related genus (figured on plate 8, fig. 4-6 as *Mycophagus? robustus*) which raises doubts whether the four larvae belong to this species, or to the much narrower and more abundant beetles illustrated on plate 7 as *Cylindrosella dampfi*.

A sample of fungus later submitted by Dr. Dampf for identification displayed a number of dead beetles and larvae adhering to the under surface or in the spore tubes where they had apparently crawled to die as the fungus dried. There were also specimens of a remarkable predaceous Gamasid mite of such diameter and extreme elongation as to suggest adaptation to the form of the spore tubes. It should be remembered that these fungi are perennial and that the residence of a colony of beetles within a single fruiting body might well persist for a number of years.

So little is known about the "smallest beetle" that we can not accept the statements of the various writers who have discussed it as all referring to the same species. Eight papers¹ by five authors consider this species, recording four widely separated localities (Mobile, Ala., Georgia, Guatemala and Cincinnati, Ohio), which seem to the writer to indicate three distinct species confused under this name. Colonel Victor Motschoulsky collected specimens in a fungus either at Mobile, Ala., or in Georgia, but his letter of July 15, 1854 (See *Etudes Entom.* 1856, pp. 6-12), does not mention microscopic beetles although he describes collecting at Mobile and Atlanta and mentions beetles in fungi at the latter place. The same letter describes his visit in Philadelphia with LeConte who nine years later (1863) described this most minute beetle under the name *Ptilium fungi* as from Mobile, collected and given him by Motschoulsky. Five years later, 1868, Motschoulsky described what we must assume to be the same species as a new genus and species, *Nanosella fungi*, without citing LeConte's description, and recording its source as Georgia, so it would appear that Mobile was an erroneous record in the LeConte paper. It seems that Motschoulsky's types have never been re-examined, but a broken specimen from the LeConte collection was studied by Matthews who described and figured it in 1872 and 1884. The descriptions and figures by this same student (Matthews) in 1888 and 1900 are based on a specimen from Alta Vera Paz in Guatemala. The latter figures differ greatly in the shape of the scutellum and most probably represent an unnamed species, which being so well described should receive a new name (*matthewsi*, new species). For comparison the writer reproduces herewith copies of Motschoulsky's 1868 figures of *Nanosella fungi*, Matthews's 1872 figure of *Ptilium fungi* LeConte 1863 and Matthews's 1900 figure of the Guatemalan specimen (*matthewsi*).

No other collector in the United States seems to have observed these beetles except Charles Dury at Cincinnati, Ohio, who has encountered two colonies each representing a new form. In July, 1907, he noticed a great number of these microscopic beetles running on the under surface of a fungus (*Polyporus cuticularis*) growing on the under side of a small beech log, and by carefully cutting off the fungus and jarring it over his collecting bottle he secured more than fifty specimens which he identified from Matthews's 1884 paper as *Nanosella fungi*, and from which he distributed samples to numerous coleopterists. This determination remained unquestioned until the present time but a new generic and specific name (*Throscoptilium duryi*, see plate 8, figs. 12-14) is now proposed because his speci-

¹References are given in the list of works cited.

mens differ so greatly in outline, form of head, pronotum, scutellum, etc., from Matthews's 1872 figure. Seven years later, July, 1914, another colony of about 25 beetles behaving like those previously caught was found upon a different fungus, *Poria cinerea*, on an elm log, but of these Mr. Dury was only able to secure eleven specimens which he described as *Nanosella atrocephala* in 1916. One of his cotypes is here figured on plate 8, figs. 7-9, and the writer has recently obtained a broken specimen, apparently this species, from a specimen of the same species of fungus that had been collected in Louisiana in 1889 by A. B. Langlois. Another species differing from all others in being much darker in color was found in a "Polyphorus" in Panama by Mr. James Zetek in July, 1923, and is below described as *Mycophagus? panamensis* (see plate 8, figs. 10-11).

Having assembled this material and information and recognized that they represent a probably extensive group of species adapted to live in spore tubes of fresh, growing Polypore fungi, the writer was pleased to find the short but remarkable record by Dr. Friedenreich, 1883, which had been overlooked by Matthews but added by the editors of his posthumous Supplement (1900, p. 7). Friedenreich tells of examining a freshly grown cinnabar red Hymenomycete at Blumenau, in the state of Santa Catherina, Brazil, and observing a "dust small" insect issue from one spore-tube, investigate the surrounding surface and disappear into another spore-tube. Unable to recognize its order he hastened home and with the aid of a small brush preserved the entire little colony of beetles which he described as a new genus and species, *Mycophagus biclavatus*, and this generic name is here applied to several of the species.

The question of wide geographical distribution of a minute species of insect has often caused comment and is a phenomenon too easily dismissed for lack of data or by assuming commercial transportation, or misidentification of material from extreme localities. But all that might be needed to acquire great geographical distribution would be utilization of wind transportation as spores are scattered. The remarkable ciliate wings of these beetles suggest the passive function of the ciliae of downy seeds and although great difficulties are in the way of observing more than the start of their flight the writer believes them incapable of more than short flights by their own power. Supposing, however, that in a given species a sufficient percentage of the fertilized females instinctively rose in the air a few feet above the vegetation, then rested for a time with their ciliate wings expanded in the position in which many Ptiliids die, and on again alighting could find proper environment for their young—we might expect such a species in time to be carried by

air currents¹ throughout its possible habitat. But in the *Nanosellini* such survivors would be few, for instead of feeding on fungus spores in general as suggested by Flach's 1889 remarks on the contents of the intestine, the forms here treated appear specialized for devouring the soft, growing spores in particular species of fungi.

NANOSELLINAE, new subfamily

The species here considered appear thus to form a group closely related to each other in such structures as pertain to their dependence upon supposedly unripened spores of Polypore fungi, and abundantly distinct from other generalized Ptiliids by a number of characters such as: the more elongate form; shorter, stouter antennae, which rarely extend behind the middle of the pronotum; obliquely truncate elytra more or less rounded at apices due to convexity but exposing a declivous area on pygidium and propygidium which is surrounded by a ring of stiff hairs; and the curved anal spine of varying shape protruding from beneath the apex of the pygidium in both sexes. In view of these characters and their incompatibility in the recognized groups of Ptiliidae it appears necessary to consider the species as constituting a new subfamily, the NANOSELLINAE. The larva figured on plate 7, figs. 10-12, differs from the few other known Ptiliid larvae most prominently in its strong armature of the ninth tergite.

The forms now known to belong to this subfamily are included in the following very imperfect key; those whose characters are stated only on the authority of other students being indicated by an asterisk.

1. Size minute, one-fourth millimeter or less, form parallel..... 2.
 Size larger, 0.4 to 0.7 mm., form oval (except in *Cylindrosella*)..... 3.
2. Head and scutellum elongate. Georgia (?Atlanta) (vide Matthews 1872)
 Nanosella fungi (LeConte)*
 Head transverse, scutellum equilateral, Guatemala, (*N. fungi* Matthews
 1900 not Lec.) *Nanosella matthewsi* n. sp.*
3. Form cylindrical, very elongate, five times as long as wide, pronotum
 longer than wide, with sides parallel, scutellum elongate; length 0.6 to
 0.7 mm. Federal District, Mexico..... *Cylindrosella dampfi* n. sp.
 Form more oval and longitudinally more convex; pronotum transverse,
 narrowed anteriorly..... 4.
4. Mesosternal carina forming a spearhead-shaped area with the acute apex
 between mesocoxae and with short, feeble median carina in front;
 body form elongate oval. (*Mycophagus?*)..... 5.

¹Great numbers of a minute beetle, *Orthoperus glaber?* were encountered on the railing at the top of the Capitol dome, 280 feet, Washington, D. C., Oct. 10, 1911, under conditions that suggested their migration in the strong warm wind that was blowing from the southeast. An area of the railing was brushed clean and during our short stay several more specimens were found within the area but in such a wind it was impossible to see such minute things flying.

- Mesosternum very prominent, strongly compressed anteriorly into an abrupt carina with deep lateral cavities for reception of front coxae and legs, the median part inflated into an oval lobe which is produced backward in a thin, horizontal, parallel-sided plate overlying inner third of mesocoxae and meeting an elevated, anteriorly truncate process from the metasternum, similarly covering part of the mesocoxae (*Throscopitilium* n. gen.)..... 8.
5. Color golden yellow, elytra rough with deep punctures, length 0.6 mm., width, 0.2 mm., Brazil..... *Mycophagus biclavatus* Fried.*
- Occiput all or partly piceus..... 6.
6. Occiput somewhat infuscate, the head darker near eyes, form narrower and more constricted at humeri, pronotum widest before base, length 0.42 mm., width 0.15 mm., Cincinnati, Ohio, in *Poria cinerea* (*Nanosella atrocephala* Dury.)..... *Mycophagus atrocephalus* (Dury).
- Occiput entirely black, form more robust, pronotum widest at base..... 7.
7. Color pale except head, form more elongate, larger; length, 0.60 mm.; width, 0.18 mm. Federal District, Mexico (Dampf).....
- Mycophagus robustus*, n. sp.
- Castaneous, except elytral margin and apex, pronotum and parts of venter paler, head black, form more depressed; length 0.45 mm., width 0.17 mm. Canal Zone, Panama..... *Mycophagus panamensis*, n. sp.
8. Form short and stout, very robust anteriorly; pronotum almost semi-circular; length, 0.42 mm.; width, 0.17 mm. Cincinnati, Ohio, in *Polyporus cuticularis* (*Nanosella fungi* Blatchley, Dury).....
- Throscopitilium duryi*, n. sp.

Nanosella fungi (LeConte) Mots.

As above stated this species is unknown to the writer and for the present we must assume that *Prilium fungi* Le Conte 1863 and *Nanosella fungi* Motschoulsky 1868 are identical and probably from the same capture at Atlanta, Georgia; also that the differences in outline between the figure by Motschoulsky and Matthews's 1872 illustration of a LeConte specimen are artist's errors in interpretation of form. LeConte states the length as "—scarcely more than 1-100 of an inch," Motschoulsky as "—hardly one-tenth ligne—" and Flach, 1889, as "—of only 0.2 mm. length—" all remarking upon the species as the smallest known beetle. Thus the copy of Motschoulsky's figures here reproduced (pl. 8, fig. 2) is slightly too small and the outline (redrawn entire from the half outline by Matthews, 1872), of the LeConte specimen shown beside it (pl. 8, fig. 1) is slightly too large for the 100 diameter enlargement intended.

The two original descriptions are here translated:

LeConte 1863, "—most minute, linear, testaceous, punctulate pubescent, thorax slightly shorter than wide, sides broadly rounded, elytra elongate, apices rounded, antennae and feet yellow. Mobile; Col. Motschulsky."

Motschulsky 1868, "Form elongate, narrow, almost parallel; elytra more than three times as long as pronotum and a little dilated behind, pronotum

without impressions, almost square and a little narrowed towards the head which is moderately small, posterior angles slightly obtuse; antennae short not passing base of pronotum, eyes distinct, punctuation very fine, pubescence invisible. Form recalling the narrow *Atomarias*. Color yellowish white, eyes black. Georgia in America. Inside a fungus."

***Nanosella matthewsi*, new name.**

Nanosella fungi Matthews 1888 and 1900—Not LeConte.

Believing the habitat of LeConte's species not likely to extend from Atlanta, Ga., to Vera Paz, Guat., and desiring to avoid the misleading inference that Matthews's 1900 figure of the latter specimen represents the structure of the genotype, a new name is here proposed based upon the latter figure and supported by the differences from the 1872 figure of *fungi* by the same author. The type is of course the single specimen found by Mr. Champion at San Juan in Vera Paz, Guat., and now assumed to be in the Godman & Salvin Collection in the British Museum. The differences have been mentioned in the table of species. An error in interpretation of the mesosternal epimeron in Matthews's description and figure is suspected. His anterior suture arising from the external anterior part of the coxal cavity coincides with what appears to be a muscle attachment inside the body and is not a suture in the forms here studied.

CYLINDROSELLA, new genus.

The elongate cylindrical form of the genotype (*C. dampfi*, new species) so lengthens all parts of the body that the recitation of contributive details such as elongate pronotum, scutellum, pro-, meso-, metasternum, etc., shown in the figures (plate 7), is unnecessary, but the inclusion of this linear species among the ovate species here doubtfully assigned in *Mycophagus* appears equally unwise. In addition to the characters in the table the following may be useful.

***Cylindrosella dampfi*, new species.**

Head large, subglobular, shining, black, impunctate; eyes lateral, very coarsely faceted; front strongly convex; labrum prominent, laterally compressed into a vertical prominence above the tips of the maxillae; antennae 11-jointed with laterally compressed three-jointed club. First joint large, subglobular; 2d as long as first but slightly narrower, cylindrical, slightly curved; 3d less than half as wide, cylindrical, as long as 2d; 4th and 5th short, together nearly equaling 3d; 6th, 7th and 8th larger, increasing in width, the 6th subglobular, the 8th twice as wide as long; 9th hemispherical, twice as wide as 8th; 10th shorter than wide; 11th conical, short. Maxillary palpi (pl. 7, fig. 4) with first joint small, second strongly pear-shaped and constricted near base, twice as long as first, third a little longer than second, and a third wider, subglobular or subquadrate,

fourth as long as third, very narrow, cylindrical, slightly curved. Rest of body yellow, sparsely clothed with decumbent hairs arranged in series on pronotum and elytra; the abdominal sternites except the first and last without hairs other than a single row on posterior margin of each, reaching nearly across the following segment. Pygidial spine a thin, narrow, apically emarginate process.

Type, allotype and paratypes.—Cat. No. 22993 U. S. N. M.

In the figures (pl. 7, figs. 1–3) the abdomen is more distended than in any of the dried specimens in which the propygidium is usually withdrawn under the elytra.

Described from 7 slides (9 ♂, 6 ♀) and 33 dry specimens (sexes not determined) from *Fomes pinicola* on *Abies religiosa* at 3200 meters altitude, Desierto de los leones, D. F. Mex., found by Dr. A. Dampf in whose honor the species is named. Two paratypes are in the Dury Collection.

***Mycophagus biclavatus* Fried. (1883).**

This species is unknown to the writer but it seems probably congeneric with *Nanosella atrocephala* Dury and the two species here described as new. *Mycophaga* Rond. 1856 (Anthomyidae) does not appear to invalidate the present generic usage. Friedenreich does not mention the pronotum nor mesosternum, and the mouthparts which he so carefully describes are not sufficiently displayed in the species before me. His description of the antennae needs correcting in that what he calls third and fourth joints may be considered the articulating basal part and the exposed principal parts of the third joint. This requires renumbering the following joints, making his apical appendage of his eleventh joint the reduced eleventh joint. The recorded habits have already been mentioned and the description need not here be quoted.

***Mycophagus? atrocephalus* Dury (1916).**

Two of Dury's cotypes have been examined, one of which unfortunately vanished while being studied. The remaining specimen has been remounted in balsam for safer preservation, and is sketched on plate 8, figs. 7, 8, 9. A third cotype kindly sent by Mr. Dury to replace the loss, shows the occiput almost black. The statement in the original description regarding widely separated hind coxae may be misleading as they are only slightly separated as in the other species. The middle coxae are apparently separated by the produced tip of the mesosternal spathula which overlies their internal margins, suggesting approach to the structure of this part in *Throscopilium*. The metasternal carinae are strongly convergent posteriorly and longer than in the other species. The specimen is a ♀ vaguely showing a large oval mass (shaped as in fig. 9, plate 8)

within the last sternite but so feebly chitinized that it is uncertain if it is the receptaculum seminis or a mature ovum. The length given as half a millimeter is also slightly too large, the cotype measuring 0.42 mm. in length and 0.15 mm. in width.

Type locality Cincinnati, Ohio. Host fungus *Poria cinerea*.

Two cotypes in the National Collection, no. 26801 U. S. N. M.

Examination of the dust brushed from an herbarium specimen of this species of fungus collected in Louisiana thirty-five years ago (Jan. 21, 1889) yielded a specimen believed to be this species although the head and prothorax are missing. It is a male with the aedeagus close to one side and much as in *Cylindrosella* (Plate 8, fig. 6) and no noteworthy differences from the cotypes are observed.

***Mycophagus? robustus*, new species.**

(Pl. 8, figs. 4-6.)

Elongate oval, moderately depressed, pale testaceous except the infusate head; body widest at middle, less than one-third as wide as long; eyes rather large, sublateral; front polished, piceus, strongly convex. Pronotum transverse, sides nearly straight, strongly convergent, base and apex broadly arcuate; a faint transverse marginal groove before base. Scutellum nearly equilateral, slightly elongate. Elytra twice as long as wide, translucent yellow showing the two masses of alar hairs as short median vittae. Mesosternum with short median carina anteriorly, the spear-head shaped median area twice as long as wide with the acuminate apex passing as a microscopic septum between mesocoxae and meeting a short similarly fine carina on the metasternum. Metasternum two-thirds as long as wide; postmesocoxal carinae short, arcuate, posteriorly convergent.

Length, 0.60 mm., width, 0.18 mm.

Type.—Cat. No. 26994 U. S. N. M.

Described from a single male specimen received in the same vial with nearly fifty specimens of *Cylindrosella* collected from a "*Polyporus*" on *Abies religiosa* at 3200 meters altitude, Desierto de los Leones. D. F., Mexico, collected by Dr. A. Dampf.

This is the largest species of the group before me and is nearly the size, form and color of the genotype (*biclavatus*) whose only known locality is approximately five thousand miles distant. It is similar in form, sculpture, and vestiture to *M. atrocephalus* but the form of the mesosternum has not been so adapted to receive the front coxae when the pronotum is deflexed.

***Mycophagus? panamensis*, new species.**

(Pl. 8, figs. 10, 11.)

Elongate oval, depressed, castaneous, the tip of the abdomen, under side of head and prothorax and the appendages testaceous. Pronotum nearly as long as wide, sides feebly arcuate, strongly convergent. Scutellum large, wider than long, apex produced. Elytra but slightly wider than base of pronotum, widest

before middle, sides feebly arcuate, apices sub-conjointly rounded; disc with sparse coarse black spots (punctures?) irregularly arranged in series. Mesosternal spathula two-thirds as wide as long, apical angle about 70°. Receptaculum seminis small, spiral, as indicated in fig. 11.

Length, 0.45 mm., width, 0.17 mm.

Three specimens (two females in balsam, one imperfect specimen dry) collected in a "*Polyporus*" on the Rio Indio in the Canal Zone, Panama, Aug. 27, 1923, by Mr. James Zetek. (No. 2256.)

Type and *paratypes*.—Cat. No. 26995 U. S. N. M.

***Throscopitium duryi*, new species.**

(Pl. 8, figs. 12–14.)

Fulvous except black head, thickly clothed with long, decumbent pubescence which is arranged in irregular transverse series. Body stout, widest at base of pronotum which is semicircular. Elytral margins feebly arcuate and convergent, posteriorly broadly rounded. Head nearly vertical, black. Antennae passing middle of pronotum, the club narrow with penultimate joint cylindrical, and longer than wide. Metasternum half as long as wide, the postmesocoxal carinae strongly convergent and nearly reaching the middle of posterior margin. Abdomen short conical, greatly retracted in most specimens, the receptaculum seminis a globular, feebly chitinized mass within the last segment (fig. 14), much as in *atrocephalus*; the aedeagus short, stout, arcuate and slightly constricted before apex.

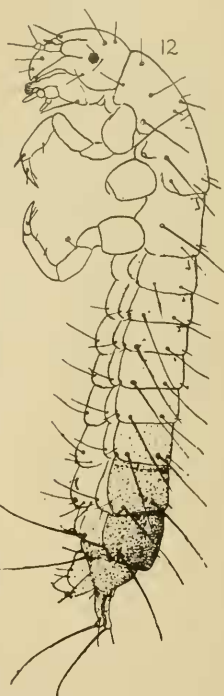
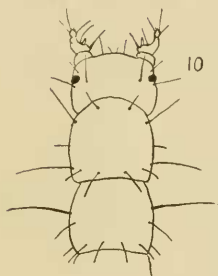
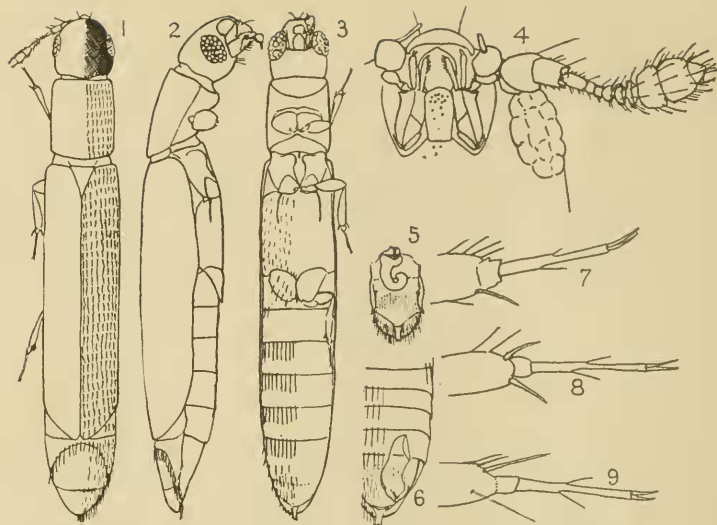
Length, 0.42 mm. (0.48 mm. distended from KOH), width, 0.18 mm.

Type, *allotype* and five *paratypes*.—Cat. No. 26996 U. S. N. M., all but two paratypes preserved in balsam. Four paratypes on card points returned to Mr. Charles Dury.

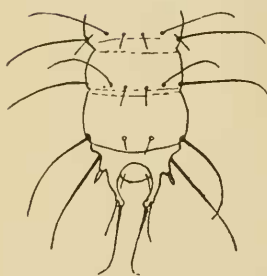
Described from eleven specimens from a large series taken by Mr. Charles Dury near Cincinnati, Ohio, from a fungus, *Polyporus cuticularis*, growing on the under side of a small beech log, July 18, 1907. Mr. Dury writes that they were clustered on one patch of fungus, running over its surface but not going off onto other surfaces. He cut the fungus off and took it home where on the 23d a few more specimens were jarred from it. On the same log was living a colony of *Microsternus* (*Megalodachne*) *ulkei* Cr. which Mr. Dury informs me lives only upon this species of fungus.

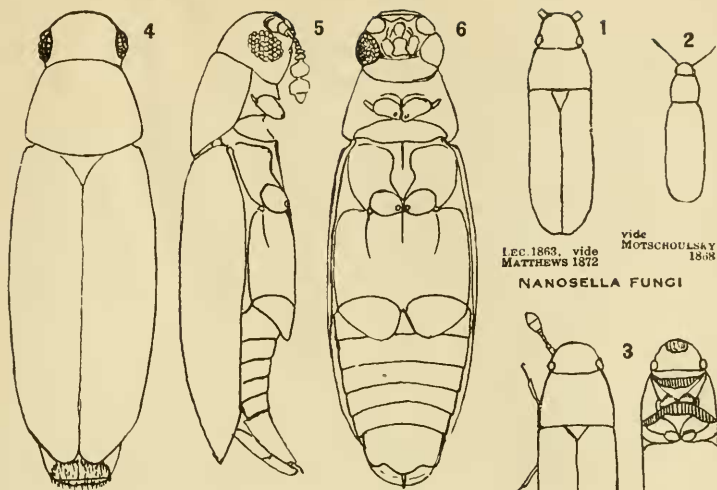
WORKS CITED.

- 1856 MOTSCHOUJSKY.—Etudes Entom. 5th year, pp. 6–12.—(travel narrative)
- 1863 LECONTE.—New Species N. A. Coleopt. pt. 1, p. 62.—(*Ptilium fungi*)
- 1868 MOTSCHOUJSKY.—Bull. Soc. Imp. Nat. Moscow, vol. 41, pt. 2, p. 187, pl. 8, fig. 3.—(*Nanosella fungi*)
- 1872 MATTHEWS.—Monograph Trichopterygia. pp. 19, 32 & 68, pl. 20, fig. 6. (*Nanosella fungi* Mots.) [LeConte]
- 1883 FRIEDENREICH.—Entom. Zeitung. Stettin. vol. 44, p. 379.—(*Myco-phagus biclavatus*)



Cylindrosella dampfi X 100
and probable larva





LEO 1863, vide
MATTHEWS 1872
vide
MOTSCHOUSSKY
1868

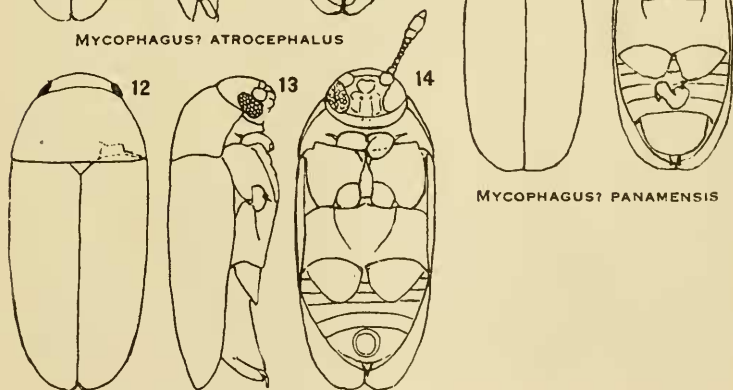
NANOSELLA FUNGI

MYCOPHAGUS? ROBUSTUS



NANOSELLA MATTHEWSI

MYCOPHAGUS? ATROCEPHALUS



MYCOPHAGUS? PANAMENSIS

THROSCOPILIUM DURYI

- 1884 MATTHEWS.—Trans. Amer. Ent. Soc. vol. 11, p. 153.—(*Nanosella fungi* Mots)
 1888 MATTHEWS.—Biol. Centr.-Amer., Coleoptera, vol. 2, pt. 1, p. 153.—
 (*Nanosella fungi* Matthews, not LeConte)
 1889 FLACH.—Verh. Zool-Bot. Gesellsch. Wien., vol. 39, p. 486 & 488.—(food
 of family and mention of *Nanosella*)
 1900 MATTHEWS.—Supplement Monogr. Trichopt. p. 107, pl. 13A.—(*Nano-*
sella fungi Matt. not Lec.)
 1910 BLATCHLEY.—Coleopt. Indiana, p. 487.—(*Nanosella fungi* Blatchley not
 LeConte)
 1916 DURY.—Journ. Cincinnati Soc. Nat. Hist. vol. 22, p. 14.—(*Nanosella*
atrocephala)

EXPLANATION OF PLATES 7, 8.

Plate 7. *Cylindrosella dampfi*.

- Figs. 1, 2, 3, dorsal, lateral, ventral of distended adult. x 100
 4, antennae, maxillae and mentum more enlarged.
 5, receptaculum seminis within detached last abdominal segment. x 100
 6, aedeagus within ♂ abdomen. X 100
 7, 8, 9, front, middle and hind tarsi, much enlarged.
 10, probable larva, dorsal aspect of anterior and posterior ends of dis-
 tended specimen. X 100
 11, anterior aspect of head of same.
 12, lateral aspect of contracted and slightly flattened larva. X 100

Plate 8. other *Nanosellini*. X 100.

- Fig. 1, *Nanosella fungi*, redrawing from Matthews 1872 figure of LeConte's
 specimen.
 2, same species (?), redrawn from figure by Motschoulsky 1868.
 3, *Nanosella matthewsi*, dorsal and ventral, redrawn from Matthews's
 1900 figures.
 4, 5, 6, *Mycophagus? robustus*.
 7, 8, 9, *Mycophagus? atrocephalus*.
 10, 11, *Mycophagus? panamensis*.
 12, 13, 14, *Throscoptilium duryi*.

CHANGE OF PREOCCUPIED NAME (DIP.).

By R. C. SHANNON, U. S. Bureau of Entomology.

Dr. F. M. Root kindly notified me that the name *Chrysops vitripennis* Shannon is preoccupied by *Nemorius (Chrysops) vitripennis* Meigen. The name *hyalinus* is proposed in its stead.
